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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/496,212	02/01/2000	Somnath Viswanath	95-333	5880
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MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307				
			EXAMINER RYMAN, DANIEL J	
			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/496,212

Applicant(s)

VISWANATH ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 March 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

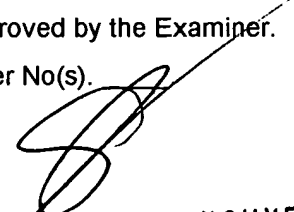
Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: \_\_\_\_\_

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s).
10. ☐ Other: \_\_\_\_\_

  
STEVEN H. D. NGUYEN  
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: On pages 2-3 of the Response, Applicant argues that Kerr teaches away from the claims since Kerr explicitly teaches that only a single unique hash key is generated where the claims specify both a hash key and a signature. Examiner, respectfully, disagrees. The term "key" is defined in Newton's telecom dictionary as "one or more characters or perhaps a field within a data record used to identify the data". Given this definition, Kerr discloses generating a set of characters by combining at least some of the characters in a field of a packet with some of the characters in another field of the packet in order to use this set of characters to identify the data. Kerr does not disclose the specifics of how the combined set of characters of the key is generated, only that the generation occurs. Applicant discloses generating a "signature", which is a set of characters used to identify data. While Kerr does not disclose the specifics of how the set of characters is generated, Applicant discloses particular steps taken in order to generate the set of characters. Specifically, the set of characters is generated by combining two keys, where a key is a set of characters from a packet. As such both Applicant and Kerr ultimately use a set of characters generated from a packet in order to identify data even though these sets of characters are given different names. Applicant and Kerr differ in that Kerr does not specify how the set of characters is generated where Applicant discloses a specific method for generating the set of bits. Rather than teaching away from the claimed invention, Examiner submits that Kerr suggests a combination in order to supply the teachings of how to generate the set of characters. In addition, Examiner submits that Applicant dubs the final set of characters a "signature" in order to distinguish the "signature" from the two keys used to assemble the signature. As such, Examiner also submits that the "signature" can be viewed as a "key" which has been generated in a particular fashion, namely through the combination of two other keys. Thus, Kerr is not teaching away from the claimed invention since Kerr does not disclose a signature. Rather Kerr is merely using different nomenclature. Given the above arguments, Examiner maintains that Kerr does not teach away from the claimed invention.

On page 3 of the Response, Applicant argues that one of ordinary skill in the art would not have been moved to combine the two references since Kerr teaches a router and Cheriton teaches a switch. Examiner, respectfully, disagrees. Examiner relies on Cheriton to teach a specific hashing routine. Cheriton also explicitly discloses that "It will be apparent to anyone skilled in the art that other hashing functions from the one shown can be used" (col. 9, lines 50-51). This suggests that hashing functions are interchangeable. As such, Examiner maintains that given Kerr's disclosure of a hashing function and Cheriton's teachings of a specific hashing function and the substitutability of hashing functions, one of ordinary skill in the art would have been motivated to combine the two references.

On pages 3-4 of the Response, Applicant argues with Examiner's assertion that a hashing function may be performed on any bits in a packet regardless of the bits' respective layer. Examiner submits that additional evidence is not necessary since the references suggest this. First, Examiner reiterates that Cheriton discloses that hashing functions can be substituted for one another. This alone suggests that hash functions are not layer specific. Second, the hash function of Cheriton is not specific to a particular layer. The hash function takes the lower order bits of two addresses and uses a bitwise Exclusive-OR to combine the bits. Since multiple layers contain addresses comprised of bits, it is clear that the hash function of Cheriton will work equivalently on any layer.

On pages 4-5, Applicant argues that the combination does not disclose combining multiple hash keys into a signature. Examiner, respectfully, disagrees. Kerr discloses generating a layer 3 hash expression, which Kerr dubs a key, by combining the bits from multiple fields of a packet, such as the address fields, into a single hash expression. Kerr does not disclose how this combination is done. Cheriton discloses that a hash expression can be generated by taking the lower order bits of one address field (first hash key) and Exclusive ORing these bits with the lower order bits of another address field (second hash key) to form a single hash expression (signature). Thus the combination suggests generating a layer 3 hash signature by combining the lower order bits of one address field (first hash key) and Exclusive ORing these bits with the lower order bits of another address field (second hash key). As such, Examiner maintains that the combination reads on the limitations of the claim.

On pages 5-6, Applicant argues that Examiner's assertion that the identifier could be "anything that could be used to identify the switching entry, such as a packet, a header of a packet, etc." is inconsistent with the purpose of using a hash key in the first place since one skilled in the art would not use the entire packet or header if hashing was already being performed. Examiner, respectfully, disagrees. Examiner is not asserting that the entire packet is used to look up the entry, as Applicant seems to argue. Rather Examiner asserts that port forwards an identifier, which can comprise a packet, a header, etc., to the switching logic. The switching logic then uses the identifier to compose the hashing signature. In this series of steps, the hashing is still performed, but the hashing is performed at the switching logic rather than the port. As such, Examiner maintains that Examiner's assertion is not inconsistent with the purpose of using a hash key since the hash key is still used for looking up the switching entry.

On page 6, Applicant argues that the term "integrated" should be defined in the claim as "single-chip" because this is how "integrated" is defined in the specification. Examiner, respectfully, reiterates that limitations from the specification are not read into the claims. As such, if Applicant wants the "integrated network switch" of the claim to mean "a switch on a single chip" then Applicant should amend the claims to incorporate this definition in the claim. In addition, Applicant asserts that defining the term "integrated" as a "unified whole" is "utter nonsense and meaningless in the art of engineering", but proceeds to state that the term "integrated" should mean a "single chip". Examiner, respectfully, points out that defining the term "integrated" as a "unified whole" is not nonsense and meaningless in the art of engineering since the reason that a "single chip" would be dubbed "integrated" is that the single chip would be a "unified whole" of its constituent parts. Thus Examiner's interpretation of the term "integrated" is not nonsense, and so it would be reasonable to use such a definition when interpreting the claims. As such, Examiner maintains that the rejection of claims 11 and 16 is proper.

On page 7 of the Response, Applicant argues that the subsystems of Zaumen are not ports since the subsystem serves multiple links. In addition there is no processing within the given port in Zaumen. Examiner, respectfully, disagrees. First, Examiner submits that a parallel port is well known, where a parallel port will have multiple links connect to a single port. Thus the fact that the subsystem contains multiple links does not mean that it cannot be construed as a port. Second, Examiner submits that a port is defined in Newton's telecom dictionary as "the physical interface between a device and a circuit". Since the port is a physical interface, it cannot perform any processing by itself. Applicant assumes in the statement "generating a packet signature by a network port" that a device connected to the port is performing the processing, not the port itself. As such, Examiner maintains that Zaumen discloses the limitations of the claim.

Given the above arguments, Examiner maintains the rejection of the claims. Applicant is urged to amend the claims to add limitations which will distinguish the claims from the prior art.